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ABSTRACT

This information resources (IR) planning document for Stephen F. Austin State University (Texas) is divided into three main sections corresponding to the organization of IR among three departments. The University Information Systems section contains: an executive summary; introduction/IR vision; external/internal assessment of planning factors and assumptions related to the impact of federal/state statutes/regulations, user awareness of computer technology, supporting technologies, impact of anticipated technological advances, World Wide Web technology, students/budget, and proliferation of desktop computers; IR strategic planning goals and objectives; and the IR environment, including organization/personnel, personnel resources, IR policies/practices, agency databases, and agency applications. The Office of Instructional Technology section contains: an executive summary; introduction/IR vision; external/internal assessment; strategic planning goals and objectives; and the IR environment, including organization/personnel. The section for the University Library contains: an executive summary; introduction/IR vision; external/internal assessment planning factors and assumptions related to levels of service, strategic planning mechanism, human resources, adaptive equipment, East Texas Consortium of Libraries membership, Integrated Library System (ILS) clients, ILS staffing, campus access to IR, TexShare program development, multimedia resources, Campus Wide Information System, imaging technology, university enrollment, state funding, dependence on outside entities, library hardware/software/infrastructure; strategic planning goals and objectives; and IR environment, including organization/personnel, policies/practices, methodology for IR planning, agency platforms/systems/telecommunications, agency databases, and agency applications. (MES)

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STRATEGIC PLAN

FOR

INFORMATION RESOURCES

1999-2003

ED 437 037

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ORGANIZATION OF THIS DOCUMENT

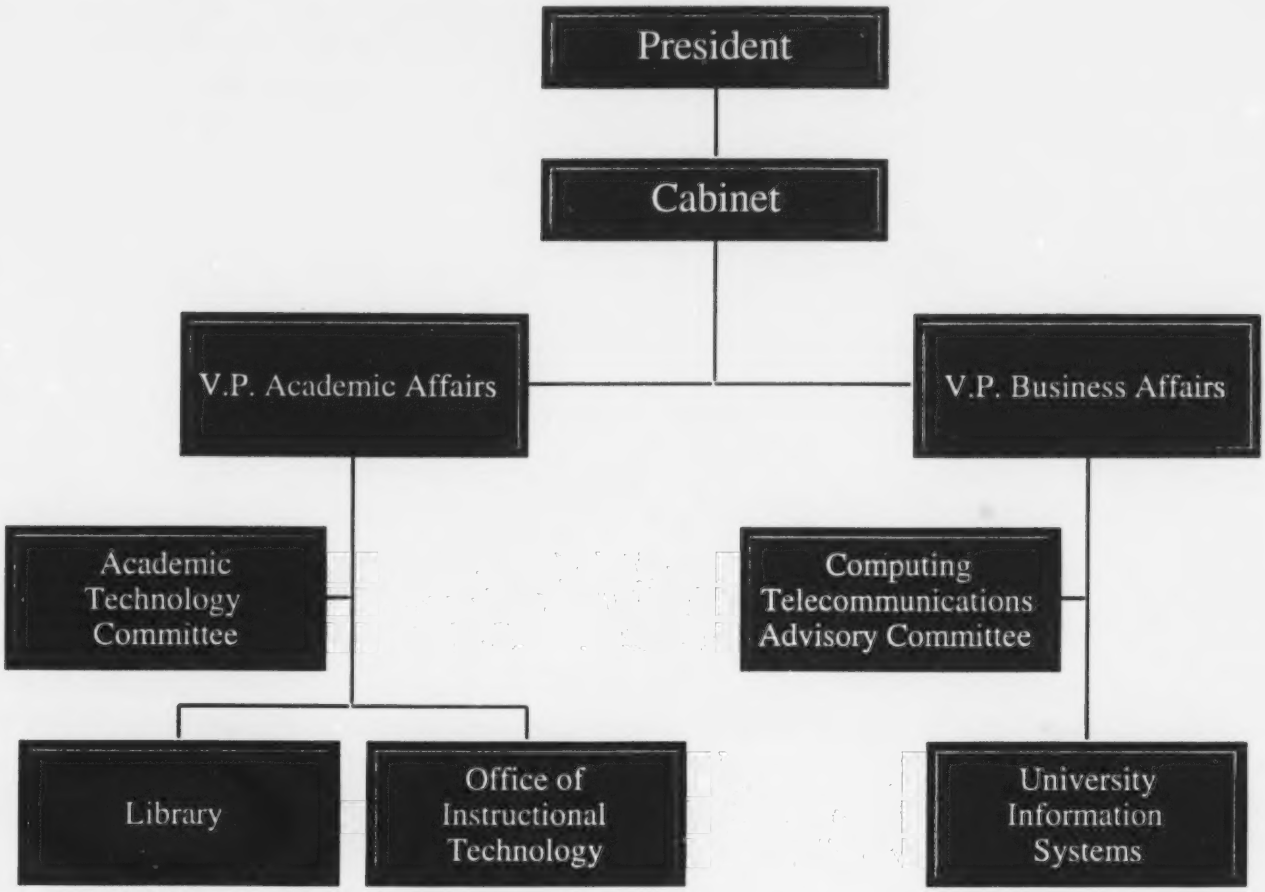
At Stephen F. Austin State University (SFA) information resources are organized into three departments reporting to two vice presidents, Business Affairs and Academic Affairs. The three departments are, University Information Systems, The Office of Instructional Technology and The University Library. The document is separated into these three areas and or sections. The reorganization of Information Resources to these areas was made in September 1995 to better support the IR goals for the campus.

SFA has just undergone a comprehensive planning effort resulting in a document titled SFA 98. "SFA 98 ...

> *...highlights nine directional themes that Stephen F. Austin State University will emphasize over the next five years as we direct our human and financial resources toward a revitalized commitment to high quality learning and continuous improvement in higher education. Specific goals, objectives, and strategies developed at the College, Division, and Department levels are of the implementation phase."*

The content of this document focuses on the goals and objectives in University Information Systems, Office of Instructional Technology and Library Information Systems that support the institution's goals outlined in SFA 98.

Technology Organization
Stephen F. Austin State University



Campuswide Information System Administration (WWW-Based)
Commercial Electronic Information Resources
Instructional Research Support
Faculty Research Support
Distance Learning Library Coordination (Including Internet)
Electronic Resource - Based Instruction
Records Retention Management

Coordination of:
Distance Learning
Instructional Computing / Telecommunications
Distributed Learning Environments
Regional Information System Development
Technology Research and Development
Faculty Training / Consultation

Help Desk
Customer Support (Academic & Administrative)
Administrative Systems
Telecommunications (Voice)
Networking (Data and Video)
Central Host Systems and Server Components

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Revised 10/7/96

UNIVERSITY INFORMATION SYSTEMS
EXECUTIVE SUMMARY

A strategic plan and direction for SFA is to totally replace all administrative systems with proven administrative systems that work. These new systems will reflect a "buy rather than build" direction. This direction was chosen to not only acquire a proven product, but to accomplish installation faster at a cheaper cost.

Systems and Computer Technology, Inc. (SCT), Melvern, PA. was selected for their suite of administrative systems after an RFI process. SCT is a Texas catalog vendor and at this printing is used in forty (40) colleges and universities in Texas. As a part of this acquisition that included Student Information System, Financial Resource System, and Human Resource System, the major university administrative applications, was telephone or voice response systems. These systems included voice response modules for registration, grades, financial aid, admissions and student accounts and are y2000 compliant.

A common hardware platform was selected for this software, Digital Equipment Corporation (DEC). The Honeywell CP-6 is phased out.

The schedule for implementation is aggressive because a number of modules are being installed in parallel. The final completion data for installation of the three major modules, Student Information System, Financial Resource System, and Human Resource System, including voice response is September of 1996. This IR objective was accomplished on time.

By September 1997, a further completion of software implementation includes voice modules for financial aid, admissions and student accounts as well as a new budget system. A move toward a more client/server environment for administrative systems is also planned to start using webpaging software. A student webpage is already in place.

Academic computing is using a distributive model with heavy use of desktop computing complemented by the use of centralized servers for campuswide applications like e-mail, listserver, news, webserver and statistical and research computing. This model will continue for the future to the year 2003 and beyond.

The central academic server will be upgraded in FY 1999. The network upgrade as indicated in our BOP, will continue to FY 2000 to achieve one (1) gigabit speed.

Currently and for the future customer support service will begin to also use a distributive model. This includes the seven major colleges employing their own PC and networking support to serve as "front-line" problem solver for the respective college. If the "problem" cannot be solved quickly the centralized customer support group is brought in for backup.

INTRODUCTION/ IR VISION

Since the first of 1994, administrative systems for SFA have taken a more committed and definite direction. That direction is toward an integrated business applications environment using state-of-the-art technologies to support all operational offices of the university, provide increased student services and planning and decisions at the top administrative level.

Major new initiatives and paradigm shifts during this transition included;

- Buy applications rather than build
- Single applications vendor, SCT
- Common hardware platform, DEC
- Move toward remote laser printing
- Upgrading of computing equipment
- Unplug the Honeywell CP6, September 1996

As of this writing, the formentioned initiates have been accomplished. The following initiatives have been identified through the year 2003:

- Emphasis on a paperless campus
- Increase the use of technology tools in the classroom
- Improve support of IR resources
- Increase the use of webpaging
- Upgrade Academic and Administrative central computing facilities
- Install computer services in residence halls
- Campus network upgrade for video and full text
- Voice respond system expansion
- Upgrade student clusters
- Move toward remote printing

Major obstacles that could constrain information resources plans include funding and legislative mandates as well as any unanticipated changes in enrollment or demands for delivery of support services. In addition, achievement of designated goals and objectives will depend to some degree on the extent to which the plan itself is implemented and incorporated into actual decision making processes on campus. In particular, methods of assessing benefits associated with achievement of goals must be determined and the results used for cost/benefit evaluations. Without this feedback mechanism for funding allocation, planned progress in information resources cannot be assumed.

EXTERNAL / INTERNAL ASSESSMENT

Planning Factor	Assumption
Impact of Federal/State Statutes/Regulations	The ongoing establishment of laws and policies by the Legislature and Governing State Agencies (DIR & GSC) for managing information as a strategic asset for the State of Texas will impact the operations at SFASU. Using state strategic planning information as a framework, a significant effort will be required to coordinate university information resources with information resources management directions being mandated statewide. The resulting improvement for on-campus information systems will not be seen without redirection of a portion of the university budget and manpower resources.
User Awareness of Computer Technology	This plan was developed using survey questionnaire and committee input from all SFASU department or account managers. The validity of survey data on computing needs and requirements may be limited by the various technologies by responders. As knowledge of computing concepts continues to increase among campus users and as needs become better defined, the quality of forecasting will improve. It is anticipated that demands for technology will tend to accelerate with a heightened awareness, with an improving ability to quantify those demands.
Supporting Technologies	In an environment where funding availability is necessarily a constraint on a acquisition of new technology, priorities must be set continually re-evaluated to optimize dispersal of funds for meeting the institutional mission. Priorities are currently set by the SFASU President's Cabinet and the Board of Regents based upon input from Deans, Department Chairmen, Directors, the Computing Telecommunications Advisory Committee and other sources. With the establishment of this planning framework and the accompanying goals and strategies, the setting of priorities and monitoring of results will become a more objective procedure.
Impact of Anticipated Technological Advances	Microcomputer hardware and software advancements have had significant impact on mainframe technologies. Within the planning horizon for this plan, it is anticipated that the development of computing hardware and software to fully departmentalize both administrative and academic computing will not become totally practical because of the need to access large data bases, provide global file backups for date integrity, and provide adequate security for data. This plan will assume a mainframe or its equivalent is still needed for the university's global administrative and academic computing needs.
Technology Assumption	Increased trends toward the use of webpaging technology will change the way in which a student is taught. With the increased use of this new tool, additional computing and network resources will be demanded.
Student and Budget Assumptions	Growth trend lines for SFASU do not indicate that either a significant growth in student population or legislative appropriations will be

Planning Factor	Assumption
	forthcoming. This plan assumes a relatively constant student population with a goal to provide quality technology for the campus community with called for increases in the spending level to meet the needs with the President's support.
Proliferation of Desktop Computers will increase all Computing needs	Desktop computers will continue to off-load mainframe computing whenever practical. The proliferation of desktop computing throughout the campus will increase the awareness for computing across all disciplines. The heightened awareness of computing potential is expected to increase central computing and networking requirements.

IR STRATEGIC PLANNING GOALS AND OBJECTIVES

Agency Goal #51	**Expand the administrative portion of the campus wide information system to:** • *Permit full communication among faculty, staff, and students* • *Provide access to financial and support information databases in addition to resources currently available* • *Include expanded electronic mail and telephone registration as well as on-line student advising and degree audit.*
IR Goal # 1	**Provide state-of-the-art information systems environment.**
IR Objective #1	**Replace existing administrative computer systems.**
IR Strategy #1	**Buy rather than build new administrative software systems**
Action Item #1	**Select vendor (SCT) IA-Plus Cobol completed.**
IR Strategy #2	**Implement major administrative software modules of SCT's products.**
Action Item #2	**Implement new FRS (financial) Fall '94 completed.**
Action Item #3	**Implement new SIS (student) Fall '95 completed.**
Action Item #4	**Implement new HRS (payroll / personnel) Fall '96 completed.**
IR Strategy #3	**Install telephone based systems.**
Action Item #5	**Implement telephone registration for preregistration Spring '96 Fall '95 completed.**
Action Item #6	**Implement telephone grades Fall '95 completed.**
Action Item #7	**Implement financial aid telephone system Fall '96 completed.**
Action Item #8	**Implement admission telephone module Spring '97 completed.**
Action Item #9	**Implement billing/receivables telephone module Summer '97 completed.**
Agency Goal #40	**Achieve the highest service level for the students and campus**

	visitors
IR Goal #2	Eliminate student lines
IR Objective #2	Speed up response time for all administrative systems
IR Strategy #4	Use state-of-the-art technology to improve student services.
Action Item #10	Install an 800 number for telephone registration for Houston and Dallas students Fall '95 completed.
Action Item #11	Contract for student access KIOSK Stations (2) Fall '96 completed.
Action Item #12	Install SCT Web software to allow student services to be accessible from home and campus lab PCs Fall '97 completed.
Action Item #13	Upgrade mini-mainframe computers to reduce response time for transactions Fall 2000.
Agency Goal #50	Continue expansion of new systems supportive of our academic mission including an upgrade computer network for high speed information exchange in classrooms, residence halls, offices, laboratories and the library.
IR Goal #3	Upgrade network to support voice, data, and video.
IR Objective #3	Achieve a gigabit transmission rate for the campus network by the year 2000.
IR Strategy #5	Plan for phased approach to upgrade the network started Fall '97.
Action Item #14	Develop wiring standards before Fall '97 standardizing wiring closets completed by GSC Fall '98.
Action Item #15	Complete fiber to all buildings Summer '97 completed.
Action Item #16	Upgrade HUBS to 100mbits Summer '98
Action Item #17	Upgrade network management tools Spring '99
Agency Goal #15	Improve the advising process.
IR Goal #4	Furnish advising faculty with as much information for advising purposes as possible.
IR Objective #4	Employ state-of-the-art tools for advising.

IR Strategy #6	**Advising tools must be compatible with our student data bases.**
Action Item #18	**New on-line transcripts for advising Fall '95 completed.**
Action Item #19	**Install a degree audit system by college. Starting by college Fall '98 and completed Fall 2000 50% completed Summer '98.**
Action Item #20	**PC download of student information for faculty advising Fall '95 completed.**
Agency Goal #B	**Conduct Research** • *External or sponsored research funds.* • *Conduct special item directed research.*
IR Goal # 5	**Begin a research computing facility for the University.**
IR Objective#5	**Employ state-of-the-art computing technology for large numerical processing tasks.**
IR Strategy #7	**Use a phased upgrade for process power and cost effective growth.**
Action Item #21	**Purchase first phase of Super Computer FY'98 completed.**
Action Item #22	**Continue building Super Computer FY 2003.**

IR ENVIRONMENT

Organization and Personnel

1. The organizational structure for University Information Systems (**See Figure 1**), is designed to provide cost effective and efficient services which are sensitive to the changing needs of the University community. The organizational structure facilitates effective input from computer users, timely operational decisions, and development of realistic long range planning.

2. University Information Systems operates under the Vice President for Business Affairs. The CIO has overall responsibility of directing the activities of University Information Systems set forth by the President's Cabinet, the Vice President for Business Affairs and the Computing and Telecommunications Advisory Committee (CTAC).

3. One committee serves also as an advisement committee to the Chief Information Officer. This committee is CTAC.

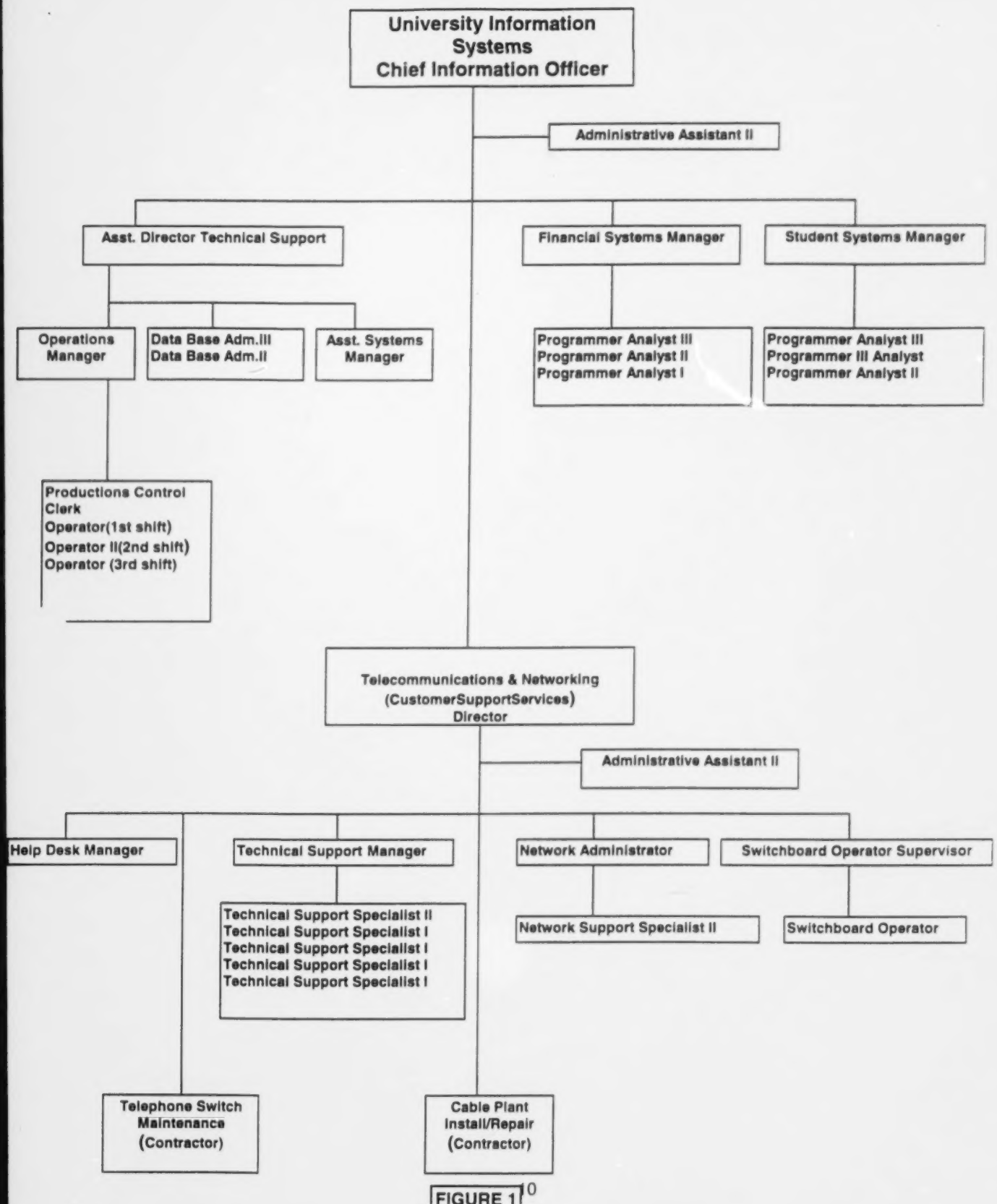

FIGURE 1

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Personnel Resources:

Available and required personnel skills within University Information Systems are summarized by departmental area below. Skills counts include individuals having multiple skills and do not reflect student assistants.

	Available Skilled	Estimated Required
University Information Systems		
Management	3	3
Secretarial/Clerical	2	2
Central Systems Technical Support		
Systems Programming (VMS)	2	2
Data Base Administration (RMS)	2	2
Administrative Systems		
Programmer / Analyst	8	8
Computer Operations		
Management	1	1
Production Control	1	1
Computer Operator	3	3
Telecommunications & Networking		
Network Support	2	3
Technical Support (IBM Clone)	6	8
Technical Support (Apple)	2	3
Telephone Operators	2	2
Telephone Switch (Maint.)	1	2
Cable Plant	3	3
Help Desk	1	3

IR Policies and Practices Table

Category	Brief Summary/Overview
IR Priorities	The Computer and Telecommunications Advisory Committee (CTAC) suggests project priorities to the Vice President of Business Affairs. CTAC is made up of faculty members and Director level staff members. The President's Cabinet sets overall priorities as introduced by the Vice President of Business and Academic Affairs.
IR Planning Methodology	Identify needs, cost justify, priorities (a function of available resources both people and monies). All this is done and submitted to Vice President level positions.
Operating System Standards	Central minicomputers are DEC open VMS while PCs are Windows and Apple Macintosh. Some NT and UNIX used.
Development Methodology	Rely upon proprietary (vendor) software and FOCUS reporting software.
Quality Assurance Practices	Data base ownership by respective users, all vendor software tested before sent to production, all fixes courtesy of the vendor. Risk management is the identification of mission critical hardware and software extensive backups stored off campus.
Change Control	Central computing resources are tightly controlled from any changes in configuration and base line software. If any changes are required, testing and documentation are required before implementation.
Security	Compliance with IR standards has been completed with the exception of a formal risk management analysis. A disaster recovery plan is on file at DIR.
Geographic Information Systems	N/A
Disaster Recovery/Business Continuity Planning	Priorities are set with the approval of the President's Cabinet. The University contracts with DEC (RECOVERAL) for central hardware replacement. Software is being stored in a bank safety deposit box off-site.
Resource Use	Policies for use of voice, data, and video have been developed and approved by the Board of Regents.
Contact/Consultant	Follow state notification and bidding procedures. At present, no contracts are in force.

Information Sharing	The University will share data only on a case by case basis and Presidential Approval.
Training and Continuing Education	Training is determined on a case by case basis by the CIO. Tracking of education received is a matter of record via accounting vouchers.

Agency Platforms, Systems, and Telecommunications

Agency Platforms and Systems

Category	Type	Operating System	Database Mgmt. System	Capacity/ Size/Count	Comments/ Descriptive Information
Mainframe	N/A	N/A	N/A	N/A	
Minicomputer	DEC ALPHA	VMS	None	3	
LAN Servers (Central)	PC, Mac	NT, SYS8	SQL	25	
LAN Servers (Remote)	N/A	N/A	N/A	N/A	
LAN Client/Work-stations (Central)	PC, Mac	WIN95, SYS7	N/A	3000	65%PC, 35%MAC
LAN Client/ Work-stations (Remote)	N/A	N/A	N/A	N/A	
WAN Servers	Mail, Web, DNS Servers, Etc.	UNIX NT VMS	N/A	25	
Standalone PC Workstations	PC, Mac	DOS, WIN31, MAC OS	N/A	20	5 MAC, 15 PC

Telecommunications Information

Category	Type	Capacity/ Size/Count	Comments/ Descriptive Information
Hubs	CABLETRON, 3COM, BAY	45	
Hub Routers & Switches (Remote)	CISCO, 3COM	25	
Remote Bandwidth AN/Alog	SHIVA LANROVER, DESKTOP MODEMS	178	DIALUP ACCESS
Remote Bandwidth Digital 56K or less	N/A	N/A	
Remote Bandwidth Digital T1	ESF/B8ZS	1	DATA
Remote Bandwidth ISDN (BRI)	N/A	N/A	
DTE/End User Equipment Arrangement	Workstations, LANs, Mainframe Devices, Other	N/A	
Supported Protocols	Network supported protocols	N/A	IP, APPLETALK, DECNET, IPX, LAT
Internet Service Provider	GSC	N/A	
Shared Network	GSC	N/A	

Database Name	**SIS-Student Information System**
Database Description	Collection of RMS files which support the operation of Student Information System. All administrative and academic offices use this data.
Database System	N/A
Estimated Physical Storage Requirements	2.43 GB
Year 2000	000001
GIS Data Classification	N/A
Sharing	Electronic transmission of data to Texas Higher Education Coordinating Board, National Student Loan Data System
Future	
Database Name	**DA-GRADS-Development/Alumni Gift Reporting and Dues System**
Database Description	Collection of ADABAS files which support the operation of the alumni/donor database and gift processing functions of the office of University Advancement and the Alumni Association.
Database System	ADABAS
Estimated Physical Storage Requirements	338.1 MB
Year 2000	000001
GIS Data Classification	N/A
Sharing	
Future	Conversion in progress to Oracle database, using Client/server technology.
Database Name	**FRS-Financial Records System**
Database Description	RMS files containing accounting and financial data used primarily by University Business Office, Controller, Budget Director, Purchasing, Audit Services, administrative and academic account managers.
Database System	N/A

Estimated Physical Storage Requirements	720 mb
Year 2000	000001
GIS Data Classification	N/A
Sharing	Reports from this data are sent to Legislative Budget Board, Uniform Statewide Accounting System, General Services Commission, Coordinating Board, Internal Revenue Service.
Future	Conversion to version 3.0 for year 2000 modifications
Database Name	**HRS-Human Resource System**
Database Description	RMS files containing employee basic and background information, payroll records, position control and labor distribution data used by university personal office, payroll office, controller, business office, budget director.
Database System	N/A
Estimated Physical Storage Requirements	84.5 mb
Year 2000	000001
GIS Data Classification	N/A
Sharing	Reports or data from this system are sent to Uniform Statewide Accounting System, Texas Payee Information System, Human Resource Information System, Teacher Retirement System, Employee Retirement System, Social Security Administration.
Future	

Application Name	**SIS Shared Components**
Application Description	Component of Student Information System which provides a consistent approach to creating and maintaining student information. Functions include adding and maintaining students (addresses, personal data, holds, comments), controlling release of information, maintaining high school and college information. Primary user is the University.
Database System	RMS
Development Language	COBOL, FOCUS
Year 2000	000001
GIS Data Classification	N/A
Sharing	None
Future	Addition of Graphical User Interface
Application Name	**SIS Admissions**
Application Description	Component of Student Information System which supports the recruitment and admission processing of incoming students. Functions include prospecting, recruiting, document tracking, application processing, admission requirements, automated decisioning, and transfer credit articulation. Primary user is Admissions Office.
Database System	RMS
Development Language	COBOL, FOCUS
Year 2000	000001
GIS Data Classification	N/A
Sharing	None
Future	Addition of Graphical User Interface. Electronic receipt of incoming transcripts and admission applications.
Application Name	**SIS Student Records**
Application Description	Component of Student Information System which supports the management of students' academic records, as well as course, classroom, and faculty information. Functions include transcript management, transfer credit articulation, student program and academic action rules, student grade processing, and course scheduling. Primary user is Registrar's Office and Academic Departments.
Database System	RMS
Development Language	COBOL, FOCUS
Year 2000	000001
GIS Data Classification	N/A
Sharing	
Future	Addition of Graphical User Interface. Electronic transmission of transcripts to other institutions.
Application Name	**SIS Registration**
Application Description	Component of Student Information System which supports the enrollment and student registration process. Functions include prerequisite and co-requisite checking, dropping and adding classes, block registration, registration restrictions, registration holds, class

	schedules, class lists, and enrollment certification. Primary user is registrar's Office and Academic Departments.
Database System	RMS
Development Language	COBOL, FOCUS
Year 2000	000001
GIS Data Classification	N/A
Sharing	
Future	Addition of Graphical User Interface
Application Name	**SIS Billing/Receivables**
Application Description	Component of Student Information System which supports student billing and accounts receivable processing. Functions include automated tuition and fee assessment calculations, online and batch bill printing, online charge and payment history, third-party and non-student processing, and integration with Financial Aid disbursements. Primary user is Business Office.
Database System	RMS
Development Language	COBOL, FOCUS
Year 2000	000001
GIS Data Classification	N/A
Sharing	
Future	Addition of Graphical User Interface
Application Name	**SIS Financial Aid**
Application Description	Component of Student Information System which supports the Awarding of financial aid to students. Functions include requirements Tracking, student budgets, need analysis, EDE, PARS, fund management Disbursement, financial aid, transcripts, and FISAP reporting. Primary User is Financial Aid Office.
Database System	RMS
Development Language	COBOL, FOCUS
Year 2000	000001
GIS Data Classification	N/A
Sharing	
Future	Addition of Graphical User Interface
Application Name	**Housing**
Application Description	Component of Student Information System which supports the assignment of campus housing for students. Functions include maintaining building and room characteristics, automation of room assignments, roommate processing, and integration with billing/ receivables. Primary user is Housing Office.
Database System	RMS
Development Language	COBOL, FOCUS
Year 2000	000001
GIS Data Classification	N/A
Sharing	
Future	Addition of Graphical User Interface
Application Name	**SIS Degree Audit**
Application Description	Component of Student Information System which supports the

	management of degree requirements and student advising. Functions include maintaining degree program requirements, customizing student degree plans, analyzing degree progress, and automation of degree checkout for graduation. Primary user is Registrar's Office and Academic Departments.
Database System	RMS
Development Language	COBOL, FOCUS
Year 2000	000001
GIS Data Classification	N/A
Sharing	
Future	Addition of Graphical User Interface
Application Name	**SIS Voice Response**
Application Description	Component of Student Information System which facilitates student access to information. Functions include registration, student schedules, grade reporting, holds reporting, admissions, billing/receivables, and financial aid. Primary user is enrolled students.
Database System	RMS
Development Language	COBOL,FOCUS
Year 2000	000001
GIS Data Classification	N/A
Sharing	
Future	
Application Name	**SIS Kiosk and WEB for Students**
Application Description	Component of Student Information System which facilitates student access to information. Functions include registration, student schedules, grade reporting, holds reporting, admissions, billing/receivables, and financial aid. Primary user is enrolled students.
Database System	RMS
Development Language	COBOL,FOCUS
Year 2000	000001
GIS Data Classification	N/A
Sharing	
Future	
Application Name	**DA-GRADS** **(Development/Alumni Gift Reporting and Dues System)**
Application Description	Supports the prospecting and gift processing functions of the two primary users, University Advancement and Alumni Association.
Database System	ADABAS
Development Language	NATURAL
Year 2000	000001
GIS Data Classification	N/A
Sharing	
Future	Conversion in progress to Viking Development System
Application Name	**Financial Accounting (FA)**
Application Description	FRS component for maintaining the general ledger, subsidiary ledger, and financial transaction records on a fiscal year basis for the purpose of

	fiscal management and financial reporting. Primary users are Controller, Business Office, Budget Director.
Database System	N/A
Development Language	COBOL, FOCUS
Year 2000	000001
Sharing	
Future	
Application Name	**Accounts Payable (A/P)**
Application Description	FRS component for management of payment activity; provides means for creating vouchers from invoices, producing and reconciling checks, and storing payment data to be used by the financial accounting component to update its ledgers. Primary user Business Office Accounts Payable.
Database System	N/A
Development Language	COBOL, FOCUS
Year 2000	000001
Sharing	
Future	
Application Name	**Purchasing**
Application Description	FRS component that provides means for maintaining vendor information requisitions, purchase orders, posting encumbrances, and invoices to be used in the A/P payment process. Primary user Purchasing Department.
Database System	N/A
Development Language	COBOL, FOCUS
Year 2000	000001
Sharing	
Future	
Application Name	**Budget Development System (BDS)**
Application Description	FRS component for fiscal year budget preparation, maintenance and Reporting. Primary user Budget Director.
Database System	N/A
Development Language	COBOL, FOCUS
Year 2000	000001
Sharing	
Future	
Application Name	**HRS Personnel Information**
Application Description	System for maintaining and reporting employee biographic and demographic information, job information, leave, deduction, benefit and retirement records. Primary user Personal Services.
Database System	N/A
Development Language	COBOL, FOCUS
Year 2000	000001
Sharing	
Future	Conversion to HRS version 4.10 for benefits system enhancements.

Application Name	**HRS Payroll Information**
Application Description	Provides means for time input, payroll calculation, producing checks and direct deposit files, reconciling checks. Maintains accumulators and check history information used for fiscal year and other period-end reporting. Primary user Payroll Office.
Database System	N/A
Development Language	COBOL, FOCUS
Year 2000	000001
Sharing	
Future	

Application Name	**HRS Position Control and Labor Distribution**
Application Description	Provides means for defining positions, establishing funding sources, encumbering, liquidation and lapsing, charging the appropriate accounts for labor, benefits and taxes, and providing this information for updating the financial accounting system. Primary users-budget director, budget analyst, payroll and controller's office.
Database System	N/A
Development Language	COBOL,FOCUS
Year 2000	000001
Sharing	
Future	

INTERAGENCY DATA NEEDS

SFA is willing to share data with other state agencies and in fact does now. Requests from other agencies in the future will be reviewed for approval on a case by case basis.

OFFICE OF INSTRUCTIONAL TECHNOLOGY

EXECUTIVE SUMMARY

The University employs information technology to enhance the academic environment and streamline operation of administrative systems. The plan presented in this document tracks responsibility of the Office of Instructional Technology (OIT) for a portion of campus information resources that support research, instructional and service activities.

Planned directions reflect a centralized responsibility for coordination, integration and support of instructional technology, rather than one of management. As technology-based teaching/learning environments evolve in a necessarily distributed arrangement, it will be increasingly important for OIT to facilitate communication between departmental, college, and University data center components, and to ensure faculty awareness of and access to developing technologies.

Increasing attention will also be paid to integration of off-campus concerns into instructional programs, including development of multiple technologies useful in distance education programs. Educational opportunities for local and regional communities will be enhanced by development of a community network and provision of access to the Internet. The Office of Instructional Technology will continue to support the expansion of the university's role as a regional hub for dissemination of information via voice, data, and video networks.

The Office of Instructional Technology resides in the Academic Affairs Division of the university, with responsibility for facilitating use of broad spectrum of technological possibilities supportive of the university's academic mission, and for coordination of integrated learning and information technology efforts. Responsibilities include:

- Coordination of access to campus computing and telecommunications resources as an integrated teaching / learning environment.
- Implementation of a learning resource center for faculty development of technology-based instructional tools.
- Faculty training and consultation.
- Development of off-campus partnerships for dissemination of technology-based instruction.
- Administration of the instructional telecommunications off-campus course inventory.
- Coordination of distance education facilities and resource utilization.
- Instructional technology research and development.

INTRODUCTION / IR VISION

If the university's leadership role in higher education technology is to b sustained, the forward momentum gained in the last five years must be maintained; not necessarily by undertaking drastic new initiatives, but by building on the existing structure through the continuous enhancement of our distributed information technology environments. Administrators, educators, staff, student leaders and alumni have created a strategic vision statement of where and what our university should be in 2003. Paramount in this vision is the need for continued enrichment of campus programs through ongoing improvements in technology resources. In light of recent campus advances, it is possible to forecast additional changes that will occur in the information technology infrastructure and associated academic benefits that will accrue.

Both on-campus instruction and distance learning programs will benefit from the evolution of an integrated teaching / learning environment, featuring a knowledge-based Intranet (campus network structure based on Internet protocol). Collaborative instruction models will be developed to fit discipline-specific needs. Computing in the classroom will become more prevalent and will emphasize multimedia technology. True interactivity with the computer and its attached devices will feature sound and motion video presentations for simulations of laboratory environments and real life situations. Applications used for instruction, as well as accompanying information sources, will not be restricted to residence on campus systems, but will be accessed from numerous sits over the Internet. This improved delivery of instructional material will supplement the traditional classroom lecture experience and allow the student to investigate the subject in greater depth, individually, and at a pace suited to their own ability in supplementary laboratory sessions.

Virtual workgroup environments facilitated by an Intranet will bring distance learners to campus via the Internet, and campus instruction will be available for transport to off-campus sites via two-way interactive distance learning and teleconferencing systems. Student enrollment will be substantially increased by those participating simultaneously from other universities, community colleges, high schools and even individual homes and workplaces. The increased demand for lifelong learning programs will provide an important new avenue of growth for instructional delivery systems.

Although technical challenges will be significant, the management and administration of a sophisticated data/video network infrastructure will b handled through coordinated efforts of academic, administrative and library computing components. Of primary importance will be the continued replacement of centralized services with distributed client/server architectures featuring high-powered servers, and provision of video transport over campus fiber-optic cabling. Academically, SFASU will serve as regional hub for high-speed connection to worldwide information resources and will continue to grow as a critical source of data and video based instruction.

EXTERNAL / INTERNAL ASSESSMENT

The information resource plan presented here is an extension of the Stephen F. Austin State University Agency Strategic Plan for the 1999-2003 period, and as such acknowledge the following environment elements:

- The current complexity of information technology and its rapid rate of change.
- The increasing "technical literacy" level of incoming students.
- Th substantial investment made recently on-campus in acquiring this technology in light of the current scarcity of state fiscal resources.
- The potential impact of projected technological development on educational activities
- The critical need for coordination in the use of both centralized and distributed technologies in direct support of the university's mission.
- The upward shift in the age structure of potential students and the associated changes in the demands placed on higher education for instruction.

IR STRATEGIC PLANNING GOALS AND OBJECTIVES

The goal of the Office of Instructional Technology is to support Stephen F. Austin State University's academic mission by insuring the information technology environment necessary for fulfillment of instructional, research and service roles as a comprehensive, state-supported regional university.

Agency Goal #1	**To broadly educate undergraduate students who come to SFA for productive careers, contributing citizenship, and meaningful personal lives and to provide graduate and professional training which will prepare students to become successful practitioners.**
Agency Objective #1	**Enhance the core curriculum and professional courses, where appropriate, to incorporate challenging issues of diversity, global awareness, and technological change.**
IR Goal #1	**Coordinate expansion of university distance learning programs**
IR Objective #1.	**Expand partnerships and offerings for formal academic courses.**
Action Item #1.	**Determine regional needs and institutional capabilities for providing academic courses using distance learning (FY96 completed).**
Action Item #2.	**Implement client/server distance learning scheduling and administration system at SFASU completed.**
IR Objective #2.	**Establish partnerships for distance education with industry.**
Action Item #3.	**Develop an educational needs database for all industries in the East Texas area (FY99).**
Action Item #4.	**Negotiate specific contracts with area industry and other partner institutions to meet their educational needs (FY99).**
IR Objective #3.	**Coordinate development and expansion of distance learning programs in the areas of continuing education and community outreach/development.**
Action Item #5.	**Determine regional needs and institutional capabilities for providing continuing education using distance learning (FY99).**
Action Item #6.	**Coordinate design of an institutional model for distance learning activities of continuing education (FY99).**

IR Objective #4.	Increase faculty exposure, interest and participation in teaching via electronic technologies.
Action Item #7.	Involve Deans, Chairs and faculty in seminars and discussions regarding distance education programs and opportunities (FY99 ongoing).
Action Item #8.	Network with colleagues at other institutions including both higher education and corporate (trainers) (FY99 ongoing).
IR Objective #5.	Develop policies and procedures for the implementation of courses and/or degree programs by electronic technologies.
Action Item #9.	Develop a consistent format for course syllabi for delivery by electronic technologies (FY99).
Action Item #10.	Identify a user-friendly policy for registration in courses by remote students (FY99).
IR Objective #6.	Provide faculty with a system of quality assistance in curriculum/course design and delivery for courses delivered via electronic media.
Action Item #11.	Identify component areas in which faculty will require training to effectively use distance education (FY96 completed).
Action Item #12.	Determine curriculum content for an on-going training and development program for distance education (FY99 ongoing).
Action Item #13.	Development methodologies and materials for detailed assessment of instructional effectiveness in distance learning (FY98 complted).
IR Objective #7.	Implement a reward system for faculty who undertake the task of developing and teaching distance education courses.
Action Item #14.	Explore all fair options for compensation for faculty who participate in distance education teaching, including inclusion in determining promotion, tenure and merit raises (FY97completed).
Action Item #15.	Coordinate modification of faculty workload policy to address distance learning participation (FY99 ongoing).
IR Objective #8.	Develop support system for distance learning students
Action Item #16.	Inventory potential constituents and define their characteristics in terms of age, family, professional needs, etc. (FY99)

Action Item #17.	Coordinate student service area involvement in development of distance learning support system implementation (FY98 completed).
IR Objective #9.	Expand existing infrastructure to accommodate expanded delivery and reception of instructional resources.
Action Item #18.	Facilitate procurement of additional hardware/software for stepwise implementation of distributed technology-based instructional programs (FY98 completed).
Action Item #19.	Ensure interconnectivity with developing wide-area networks and maintain adequate bandwidth for effective data/video transmissions (FY99 ongoing).
IR Objective #10.	Develop an effective plan for financing the infrastructure and other capital expenses associated with the delivery of distance education.
Action Item #20.	Develop funding mechanisms for initiation of immediate program/infrastructure needs in response to demand (FY99).
Action Item #21.	Develop fiscal support for long-term development (FY99).
Action Item #22.	Develop a plan for the long-term life cycle replacement and upgrade of equipment through careful control of inventory and planning (FY99).
Action Item # 23	Implement long-term life cycle replacement and upgrade plan (FY2000).
Agency Goal #2	To promote the social, economic, and physical well being of the state and region through the application of the knowledge and talent of university faculty and staff.
Agency Objective #3	Increase externally funded community service programs.
Agency Objective #5	Increase the number of University consultation services provided by the faculty and staff through its various divisions and programs.
IR Goal #2	Expand off-campus access to local and remote information resources on a cost-recovery basis
IR Objective #11	Extend campuswide information system (CWIS) to host information sources and applications supportive of the campus role of public service provider
Action Item #24	Assess demand for public access to information technology (FY97 completed)
Action Item #25	Evaluate existing programs and options in use at other universities (FY97)
Action Item #26	Develop account management/chargeback processes for off-campus technology access (FY99)

Action Item #27	Initiate public access to campus coordinated information resources [Biennial Operating Plan Project "Nacogdoches Community Network" proposed for FY98 completed]
IR Objective #12	Develop role of regional hub for the National Information Infrastructure (NII)
Action Item #28	Continue to seek outside funding through grants and contracts to evaluate and implement high-speed network connectivity (FY99 ongoing)
Action Item #29	Pursue membership in regional consortium for cost-effective implementation of information service delivery programs (FY96 completed)
Action Item #30	Implement and coordinate administration of Internet access (FY99 ongoing).
Agency Goal #3	To maintain and enhance the physical facilities of the institution in order that they might more effectively meet the needs of academic and student life programs.
Agency Objective#3	Enhance facilities in response to program and enrollment needs as identified by annual survey of college deans and facilities managers.
IR Goal #3	Improve the potential for faculty and student use of advanced technology in classroom and laboratory instructional processes.
IR Objective #13	Improve faculty/student awareness of available technologies through improved information transfer mechanisms
Action Item #31	Upgrade campuswide information system to support worldwide web (WWW) multimedia information retrieval technology from faculty/student microcomputers [Biennial Operating Plan Project "Campuswide Information System Enhancement" proposed for FY96 completed]
Action Item #32	Link campus computing listserv application to electronic mail for automated posting of technology announcements, discussions, etc. (FY96 completed)
Action Item #33	Advertise student computing resources at registration, orientation, and in freshman seminar course (FY99 ongoing)
IR Objective #14	Increase access to and use of decentralized instructional technologies through expansion of new systems
IR Strategy #1	Coordinate and support discipline-specific courseware development within academic departments
Action Item #34	Construct a state-of-the-art media center for improved development and delivery of multimedia instructional materials [Biennial Operating Plan Project "Instructional Media Center" proposed for FY99 ongoing discussion].
Action Item #35	Provide personnel resources for support of instructional application development projects (FY99 ongoing)

IR Strategy #2	Implement a comprehensive, network-based mediated learning environment (MLE) for high speed information exchange in classrooms, residence halls, offices, laboratories and the library
Action Item #36	Coordinate faculty/student access to MLE in offices and laboratories (FY 99 ongoing).
Action Item #37	Development central MLE server system (FY99)
Action Item #38	Coordinate integration of MLE with existing campuswide information system (CWIS) for access to worldwide web (WWW) resources (FY99 ongoing)
Action Item #39	Continue support of accessibility for faculty, staff and students with physical disabilities in compliance with the Americans with Disabilities Act (ADA) (FY99 ongoing).
IR Objective #15	Encourage integration of new technologies into delivery of classroom and laboratory instruction
IR Strategy #3	Provide faculty and staff with the training and support necessary to use technology effectively for enhancement of teaching, research and administration.
Actin Item #39	Survey requirements for Learning Resource Center (FY99).
Action Item #40	Construct comprehensive Learning Resource Center for faculty training and application testing (FY2000).
Action Item #1	Upgrade existing faculty training program to include state-of-the-art instructional tools such as video applications and mediated learning environments (FY99).
Action Item #42	Lobby for establishment of technology awards for faculty (FY98 completed).
Agency Goal #4	To manage the fiscal resources available to the University to maximize their impact on programs through increasing efficiencies and reducing administrative costs.
Agency Objective#1	Keep each year's cost of educating a student within the higher education price index.
IR Goal #4	Improve planning/budget processes for instructional technology.
IR Strategy #4	Provide for faculty/student input to IR strategic planning process.
Action Item #43	Conduct comprehensive information technology needs assessment of faculty/staff/students (FY99).
Action Item #44	Establish annual review process for goal achievement assessment (FY99).
Actin Item #45	Create separate academic technology budget and planning committee (FY95 completed).

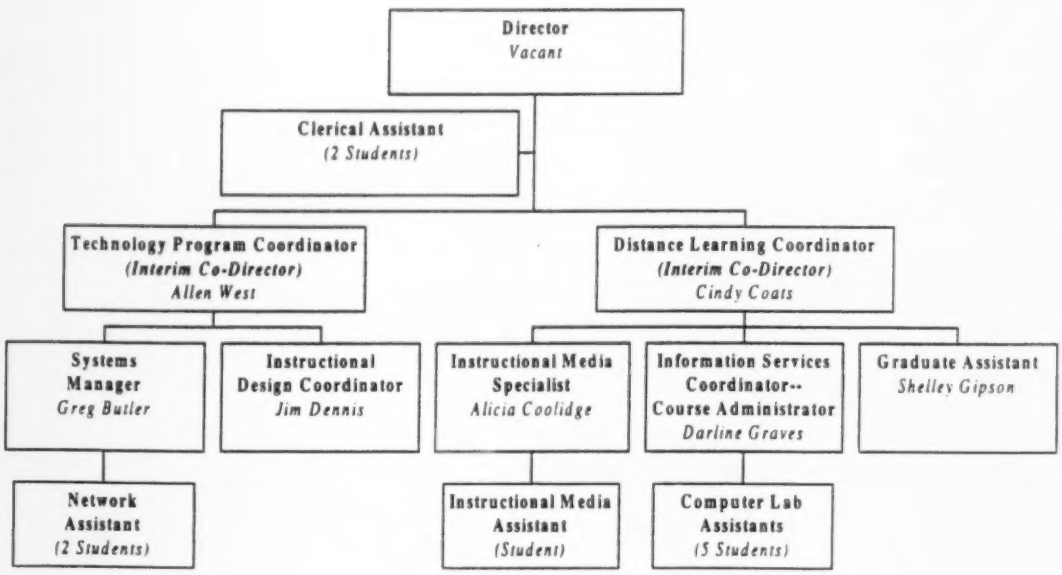
IR Strategy #5	**Link technology expenditures to information resource planning and integrate academic information technology planning with efforts of other campus computing units.**
Action Item # 46	**Develop life-cycle replacement algorithm for use in all campus strategic planning (Biennial Operating Plan Project "Life Cycle Replacement Implementation" for proposed for FY 95 completed).**
Action Item # 47	**Investigate feasibility of centralized self-insurance program for maintenance of technology hardware across academic colleges (FY99).**

IR ENVIRONMENT

Organization and Personnel

The Office of Instructional Technology (OIT) operates under the Vice President for Academic Affairs. The Director provides university-wide coordination of instructional activities involving the integration of information technologies into teaching and learning environments. The Academic Technology Committee (ATC), an advisement committee, provides the Office of Instructional Technology and the Academic Affairs Division with input on issues related to academic technologies used for instruction and research.

Office of Instructional Technology
Summer 1998



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RALPH W. STEEN LIBRARY

EXECUTIVE SUMMMARY

"Ralph W. Steen Library defines its primary mission as supporting education and research at Stephen F. Austin State University by providing the services and resources necessary to collect and/or retrieve information pertinent to the curriculum of the university. The librarians administer the resources in a manner that facilitates optimal access for on-campus as well as distance learners. Librarians work in partnership with other faculty to enhance student outcomes by teaching concepts critical to a lifelong understanding of how information is created, organized, accessed, and evaluated. The library defines its secondary mission as extending services to a wide variety of users insofar as doing so is reasonable and not in conflict with our basic mission."

The Ralph W. Steen Library has traditionally provided information about materials in its collection, e.g., full-scale books and journals, microforms, audio, video, etc. primarily to in-house patrons. These materials were accessible to patrons through the online catalog, and the books, journals, and microforms were available on open shelves within the library. In recent years the trend has been to also provide information on resources which may not be housed within the library, and which themselves may be in electronic formats stored on computers and servers either inside or external to the library. Access to these electronic sources is through an electronic information system incorporating the online catalog and other access software as well. Thus, access points have been extended from within the library to any appropriately-equipped computer via network or dial access. This transition has caused the library to change its emphasis from acquiring and housing materials to providing access to information regardless of format or location.

As a results of careful planning and management, the library has developed an infrastructure upon which to build the library of the future--a 'library without walls' where at any time a user from any location may access information resources located anywhere in the world. The success of the 'library without walls' depends in equal part on user instruction, seamless access to information resources, and a well-designed, stable infrastructure, all of which are high priorities for the library staff.

INTRODUCTION/IR VISION

In 1994, the library acquired its third integrated library system (ILS). Each new system was more sophisticated and more functional than the previous. With the installation of the second system in 1988, the library added its first staff with a degree in computer science to operate and maintain the ILS and related hardware. With the installation of the third system in 1994, PCs were acquired for each staff member and production applications and electronic information services soon became available. Today the Library Systems Department has five full-time staff and is responsible for the library infrastructure--computer related wiring, hardware, and software; for administrative software training and help desk; and for a student computer lab, the Library Information Network Center (LINC) and LINC user support. Eight to ten FTE students are also required for support.

The library took advantage of the building addition in 1990-91 to provide space for a microcomputer lab (102 PC's and MAC's) and classroom (29 PC's). Over 400,000 patrons used the Library Information Network Center (LINC) in FY97. The number of applications and electronic information resources available to LINC users continues to increase.

The rapid increase in the availability of resources on the Internet and the popularity of Internet access with the users has caused the library to reconsider many of its plans for the future. With the identification and cancellation of expensive journal and CD-ROM titles in FY98, the library began offering more electronic access and document delivery to the university community via the Internet. The trend is away from in-house databases and toward access and document delivery from databases and vendors across the Internet.

The library has become very active campus-wide in information management and training.

- Several years ago the state established requirements for records management by state agencies. The library was assigned the task of records management for the university. The university is now faced with the disposal of records that no longer need to be retained.
- In the fall of 1996, the library assumed responsibility for the development of the Campus-Wide Information System (CWIS) in conjunction with the department of University Information Services. The library's Access Services Department was assigned the responsibility of maintaining the overall organization and coordination of information on the Web and for assisting Web page developers. This has been a major, ongoing activity for Access Services.
- CLU (Comprehensive Library User Education) is an innovative program which teams reference librarians with faculty in a joint effort to rewrite curriculum to ensure that students will gain the information literacy skills needed in a 21st Century work environment.
- The Access Services and Reference department offer workshops and demonstrations for faculty and students on Internet access, web-page design, library instruction, etc.

In FY96 the library began offering limited access to multimedia by purchasing new computers with multimedia capability. In the summer of 1997, the library began scanning heavily used, non-copyrighted reserve materials into a database. These imaged documents are available over the network. To continue providing access to ever increasing amounts of data and images, the

library is going to have to upgrade its network infrastructure and much of its equipment. In Spring 1998 specifications for rewiring the building were written and are now in the bid process.

Funding remains the primary constraint on the development of information technology for the library. Additional funds are needed for the resources themselves and to expand access to these resources--both internally and externally; to attract and retain high-quality technical staff; and to replace equipment and network infrastructure, as it becomes obsolete or inadequate to support services which consume ever-larger bandwidths.

EXTERNAL/INTERNAL ASSESSMENT

Planning Factor	Assumption
Levels of Service	The information resource services already established in the library, most notably those offered through the Library Information Network Center (LINC) and the Access Services and Reference Departments, have been well-received and have managed to sustain high user satisfaction rates, according to the annual survey of library patrons. These services have created a strong foundation for future IR development and should lend themselves well to further enhancements and expansion as new capabilities are made possible by technological advances. These forward-minded programs have earned Steen Library the reputation as a model for information resource system implementation in libraries.
Strategic Planning Mechanism	The library has a well-established, organized framework for long range planning and consideration of strategic alternatives that impact both the present and future. This framework centers around the ongoing development of a five-year plan that anticipates future developments and plots a course for adapting to these developments. Furthermore, these strategic plans are carefully coordinated with the mission, goals, and objectives of the university, ensuring that the library's goals complement and support those of the university.
Human Resources	The library staff has kept its technological skills up-to-date through internal and external training programs. Support for staff development is a high priority so that users can be provided with the best possible services.
Adaptive Equipment	The library has achieved a fairly high level of compliance with ADA requirements for information resource services. Adaptive equipment is already in place at dedicated workstations and additional capabilities are being implemented or planned as needs arise and advances in technology are available. Efforts are being made to provide software which is compatible with that used by patrons on their personal computers.
East Texas Consortium of Libraries Membership	Participation in this regional organization provides the library with opportunities for resource sharing and staff development.
Integrated Library System (ILS) Clients	In Spring 1998, the vendor provided a Web platform for accessing the library's online public catalog and migrated the other ILS clients to the Windows platform. This portion of the Library Systems operation is being simplified as these features are implemented.
Library System Staffing	The five-member Library Systems staff is responsible for managing an ever-increasing workload of both public and technical services operations, including maintenance of the library system, the LINC and administrative LANs, over 250 networked stations throughout the

library, special programming as needed for library staff, access to library resources from both campus and off-campus sites, Internet access from the library, training for all library staff, and support for the library's many LINC users during all open library hours. All of these responsibilities are critical to the success of the library's operation, and all of them require a significant amount of time and expertise. To successfully manage all of their responsibilities, the department depends heavily on student assistants who require extensive training and who are not always available during critical periods. The department needs another full-time technical staff member to provide depth, dependability, and reliability.

Campus access to information resources

The library is using the Internet to extend the availability of electronic information resources to faculty workstations around campus, dorms and from home. The design and implementation of the library's portion of the campus-wide information system will provide higher service levels to the campus community with regard to accessing information both internal and external to the library.

TexShare program development

Further development of TexShare, a state-wide resource sharing program, will provide greater opportunities for resource sharing with other universities and community libraries. By enabling access to such materials rather than ownership, a more efficient allocation of funds for information resources and collection development efforts should result.

Multimedia Resources

The World Wide Web, through its incorporation of text, graphics, images, sound, and even full motion video, will become the platform for most multimedia development on campus.

Campus Wide Information System

The library has been assigned primary responsibility for developing the Campus Wide Information System into a more comprehensive information and management system that could greatly facilitate instruction, research, and administration.

The library is working on a proposal for a Teaching Excellence Center to be housed in the library. The center would provide personalized help to faculty with everything from the effective use of a Web browser to multimedia preparation and use in instruction. Such a center would draw on the expertise of many campus departments, serving as a clearinghouse for specialized consulting. The center would also provide course instruction as an extension of services offered by Access Services. Specialized hardware and software will be required for the center.

Imaging Technology

Imaging technology promises real benefits for preserving and extending accessibility for both the general collections and special programs like records management. Documents can be scanned into a computer and stored on laser disk, and in many cases, the originals can then be discarded, releasing significant shelf space. In addition, scanned documents can be made available over a computer network to appropriately-equipped workstations, a real benefit to users. Preservation and extension of accessibility are expensive in both equipment and labor. The library will continue to seek funding

for these projects.

University Enrollment

Because the library's operation and maintenance budget is funded by the Library Use Fee and is based on registration for course hours, a decrease in enrollment translates to a decrease in operation and maintenance funds for the library. This will affect the library's ability to pay for hardware and software service contracts, new equipment, equipment and computing infrastructure upgrades, supplies, and interlibrary loan costs.

State Funding

This covers all library expenditures other than operations and maintenance. Library materials (books, AV, etc.), online searching, interlibrary loan commercial document delivery, etc. are purchased using state funds. The library formula was cut by 50% a decade ago and has never been restored. Salaries, wages, and funds for information resources have all been negatively impacted.

Dependence on Outside Entities

The success of a majority of the library's service programs is dependent on the cooperation of individuals, departments, and other organizations outside the library.

For example, for the records management program to meet state-specified requirements, all other departments and offices on campus must provide accurate and complete assessments of their records management needs, and the funding necessary to establish the program must be made available. The Library Systems Department is dependent upon the cooperation of the campus computing staff for maintaining the campus information system so that the library's resources can be accessed from remote sites and the library can access resources on campus and on the Internet, and for installing and maintaining faculty workstations in a manner that enables faculty access to available library resources. The Access Services Department is dependent on the campus telecommunications staff for maintenance of the phone system so that online searching services, in which staff accesses electronic information services for library patrons, may be provided in a reliable, consistent manner. Finally, the Reference Department is reliant upon the cooperation of faculty for the efficient development of the library's collection through acquisition or access to appropriate electronic resources and for the development of effective bibliographic instruction tools both for (how-to's) and using (CLUE modules) electronic resources.

Several times over the last few years, as the library's dependence on outside organizations became more obvious, internal timetables for implementing systems and making services available were necessarily modified due to delays caused by others. These delays, which lead to negative perceptions on the part of users and even a lack of cooperation from other outside organizations, are extremely damaging not only to the level and quality of service provided but to the morale and enthusiasm of library staff members, who must deal with the negative PR and attempt to complete the project(s) under tighter, more restrictive deadlines.

Library Hardware, Software, and Infrastructure

The library is open 98.5 hours a week and the public computers are in constant use. The quality of service provided cannot continue if computers are not replaced on a regular basis. As machines age they require more staff time to maintain and they become incompatible with newer releases of software and newer technology. With over 250 public and staff computers it is imperative that a plan be implemented to systematically replace machines when they wear out. Because funding for new machines was not received in FY97, the library upgraded the 486 stations to pentiums and used the old 486 boards to upgrade the 386 stations to 486's. Hard drives have been replaced in many of the machines to get more use from them. Soon many of these machines will need to be replaced, upgrading internal components will not be an option.

The Novell NetWare operating system software was upgraded in FY97 to allow more flexibility internally and hopefully improve connectivity campus-wide. The Novell server was replaced in late spring FY98.

In FY97, the library purchased some new hubs and resegmented the network and isolated the servers on separate segments.

The network bandwidth has become the greatest concern as the library expands its services to include more full image and full text applications. Preparing for faster bandwidth will require installation of new wiring, hubs, and network cards. In late spring 1998, a rewiring specification was written and is now out for bid. Funds for rewiring have been requested every year since FY97; however, none have been granted. If the library has to use O & M funds to rewire the building, some other projects or programs may suffer.

In the fall of 1997, the library leased a DEC Alpha to replace the RISC/6000 as the processor for the library's ILS. Some of the benefits from this acquisition have been more reliability, faster processing, and the ability to run ILS programs during hours when the library is closed.

By the year 2003, the Novell server running the network, the DEC Alpha server running the ILS, and the RS/6000 server now running WebPAC will all have to be replaced. The average life span of our servers has been three to five years. Funds will be needed for replacements.

IR STRATEGIC PLANNING GOALS AND OBJECTIVES

Agency Goal 1

Continue expansion of new systems supportive of our academic mission including:

- Distance Education technology for professional training and instruction
- A state-of-the-art media center for improved development and delivery of multimedia instructional materials
- An upgraded computer network for high speed information exchange in classrooms, residence halls, offices, laboratories, and the library

IR Objective 1

Improve public access to information services, emphasizing electronic resources.

IR Strategy 1

Implement new computer system, based on client/server architecture.

Action Item 1

Complete payment of the system by working with vendor to resolve unmet specifications FY97 completed.

Action Item 2

Install WebPAC or similar product to provide better access to the library's online catalog completed FY98.

IR Strategy 2

Provide Internet access to databases and indexes.

Action Item 3

Examine costs, overlap, and the overall direction of library in providing electronic access to library's CD-ROM databases, completed FY98. The library decided to offer electronic access to more resources via the Internet. Examination of resources will be a continuing process.

Action Item 4

Participate in regional resource sharing, on-going.

IR Strategy 3

Develop library multimedia services.

Action Item 5

Purchase machines with multimedia capabilities, beginning FY96, completed. On-going.

Action Item 6

Propose a Teaching Excellence Center where faculty can receive personalized help in FY98 or FY99.

IR Strategy 4

Develop electronic reserve collection.

Action Item 7

Begin transferring non-copyrighted material to electronic form, FY97, completed. This will be an on-going process.

IR Strategy 5

Upgrade library computing hardware, software, infrastructure.

Action Item 8

Annually request funds to replace approximately one-third of the workstations, FY96-FY98. Upgraded PC's using O & M funds, FY97. An on-going process.

Action Item 9

Request funds to upgrade or replace Novell NetWare operating system, FY96-FY97. Upgraded using O & M funds, FY97. Replaced server using

	O & M funds, FY98. Request funds for replacing server every three to five years, FY01.
Action Item 10	Request funds to increase network bandwidth, FY96-FY99.
Action Item 11	Request funds to upgrade RISC/6000 hardware, FY97. Leased DEC Alpha using O & M funds, FY98. Request funds for replacement of ILS Server every three to five years, FY01.
Action Item 12	Request funds to upgrade WebPAC server every three to five years, FY00.
Action Item 13	Replace old CD-ROM tower technology with more modern technology, FY98, completed.
Action Item 14	Upgrade operating system on PC's, FY98. In process.
Agency Goal 2	Help students acquire the skills needed to learn independently and encouraging in them an excitement about the pursuit of lifelong learning
Agency Goal 3	Provide faculty and staff with the training and support necessary to use technology effectively for enhancement of teaching, research, and administration.
IR Objective 2	Work with faculty to develop student proficiency in the use of library resources with an emphasis on electronic information resources.
IR Strategy 6	Provide professional library support to faculty to incorporate library resources and information literacy concepts into their course curriculum.
Action Item 15	Begin pilot projects to redesign selected course curricula, FY97, completed.
Action Item 16	Have at least two model courses in place and at least two more under development, FY97, completed.
IR Strategy 7	Develop a library module for the campus-wide information system.
Action Item 17	Begin development of the library's WWW home pages, FY97, completed. On-going.
IR Strategy 8	Promote and evaluate library resources and services.
Action Item 18	Buy space in the Pine Log on a continuing basis and produce informational articles and news releases, FY97, completed.
Action Item 19	Develop a library instruction assessment model to systematically evaluate and assess library instruction efforts, FY97.
IR Strategy 9	Develop Internet curriculum.
Action Item 20	Develop joint curricula based on course offerings from Instructional Technology and the Library, FY97 completed.

IR Strategy 10	Develop a new program for instructional research consultation for graduate students
Action Item 21	Begin program development and publicity planning, FY97 completed.
Action Item 22	Implement new program, FY98, completed.

Organization & Personnel:

(See attached organization chart.)

The Circulation Department checks in, checks out, and shelves books and other library materials and maintains the reserve and audiovisual/music collections.

The East Texas Research Center acquires Texana and source materials relating especially to East Texas and preserves rare and other materials needing special protection or handling. The East Texas Research Center also manages a university archives program and is responsible for the university's records management program.

The Access Services Department manages interlibrary loan and commercial document delivery operations, performs mediated online searching, maintains the library portion of the Campus-Wide Information System (CWIS), and promotes the development of access to information not owned by the library. This department manages the Campus-Wide Information System (CWIS) and provides instruction and aid in Web page development.

The Reference Department answers user questions, selects materials for the library's collections, performs ready reference online searches for patrons, manages government documents depository programs, and delivers library instruction. Some reference staff may be assigned to mediated searching responsibilities.

The Academic Assistance and Resource Center (AARC) provides tutorial programs intended to improve student skills in areas basic to their success in college.

The Bibliographic Control Department catalogs and physically processes library materials and is responsible for the maintenance of the online catalog.

The Acquisitions Department acquires materials for the library's collections, maintains accounts of materials expenditures, and mends, repairs, and binds library materials.

The Library Systems Department develops and maintains extensive computerized systems, which support all library functions, and operates the library's microlab, known as the Library Information Network Center (LINC).

Staff in each department have been selected for specific qualifications and skills. Workshops and training are offered as new products and programs are introduced and staff are encouraged to take advantage of these opportunities.

Most departments are heavily dependent on students to perform many of the assigned tasks. Students are compensated according to the knowledge required for the duties they perform.

Policies & Practices:

The Library has many policies and procedures that support information resources management. Such issues as compatibility, licensing, copyright, availability, system backup, security, staff training, continuing education, reciprocal borrowing, etc. are all covered by policies and procedures. A paper copy

of the policies is issued to each department. Hard copies of the procedures are provided to the staff member performing the procedure. Soft copies of both are available on the administrative LAN.

Methodology for Information Resources Planning:

The following committees and staff have input into information resource planning. IR plans must be approved by the university administration before implementation. A status report is prepared each year to document progress.

Long Range Planning Committee (library cross-functional team)
Library Committee (faculty from various departments)
Administrative Committee (library admin. and department heads)
Library Director
Associate Directors
Library Systems staff
Library Services Council
Library Internet Committee
Collection Development Committee
Computing and Telecommunications Advisory Committee

Agency Platforms, Systems, and Telecommunications: (Narrative)

The Steen Library network is anchored by a Cisco 4700-M router with 12 ethernet 10baseT ports and 1 ethernet 100MB port. The 100MB port is not currently in use but will be used in the near future for our connection to the campus backbone. Our Novell 4.11 server acts as the server for both data files and server-based applications. This Novell server is an Intel-based computer with 256MB of RAM and 18GB of hard disk storage. Our network supports three protocols: IPX, TCP/IP, and AppleTalk. Steen Library has a total of approximately 200 Intel-based computers connected to the network. Of these Intel-based computers, approximately 40 of them are 486's; the rest are pentiums. There are also 30 Macintosh PowerPC's in the library. Approximately 60 of the pentiums are used by staff; the rest are for public use. All of the 486's are for public use.

Last year we installed a DEC Alpha system with Digital Unix (version 3.2) to serve our Horizon library management system. The Alpha has 512MB of RAM and 20GB of disk space. The Horizon system has been developed and is supported on the Sybase Database Management System (currently System 11, in our case).

Our IBM RS/6000 (128MB RAM and 20GB disk storage) system runs AIX version 4.1 and is utilized as a host to WebPAC, the library's World Wide Web interface to the online catalog. The RS/6000 also currently runs the client to access the Information Access databases we employ in the library.

Our 4 CD-ROM towers have a total of 56 12-speed drives available for network access. The CD towers run software that was purchased from CD Connection who is now known as Realm Technologies.

The World Wide Web server is an Intel-based, pentium clone (64MB RAM, 2GB disk storage) running Windows NT.

The Library Information Network Center, our public computer lab, provides one dot matrix printer per four stations. Dot matrix printing is available free of charge. A fee is charged for laser printing, both color and dot matrix. We have three black and white laser printers and one color laser printer. There are 6 black and white laser printers for staff; no color laser printers for staff use.

A J&L Chatterbox is a communications server to provide us LAN access to OCLC services through a dedicated phone line. We will be implementing another option in the near future; this will allow us dedicated TCP/IP connectivity to OCLC through our Cisco router.
We have requested funding for a major network upgrade to be performed this year. The request includes new category 5 wiring to replace the current mix of category 3 and Type II cabling currently installed in the building.

Agency Platforms, Systems, and Telecommunications

Agency Platforms and Systems

CATEGORY	TYPE	OPERATING SYSTEM	DATABASE MGMT. SYSTEM	CAPACITY/ SIZE/COUNT	COMMENTS/ DESCRIPTIVE INFORMATION
Mainframe					
Minicomputer	DEC ALPHA 4000	UNIX	SYBASE	300 MHZ	
LAN Servers (Central)					
LAN Servers (Remote)					
LAN Client/Work-stations (Central)					
LAN Client/ Work-stations (Remote)					
WAN Servers					
Standalone PC Workstations					

Telecommunications Information

CATEGORY	TYPE	CAPACITY/ SIZE/COUNT	COMMENTS/ DESCRIPTIVE INFORMATION
Hubs			
Hub Routers & Switches (Remote)			
Remote Bandwidth Analog			
Remote Bandwidth Digital 56K or less			
Remote Bandwidth Digital T1			
Remote Bandwidth ISDN (BRI)			
DTE/End User Equipment Arrangement			
Supported Protocols			
Internet Service Provider			
Shared Network			

Agency Databases

Category	Provide
Database Name	**Horizon**
Database Description	Steen Library's online integrated library system; contains detailed information about the library's holdings; and is used by the students, faculty, staff, and general public.
Database System	Ameritech Library Services - Horizon system
Estimated Physical Storage Requirements	5GB
Year 2000	000001
GIS Data Classification	N/A
Sharing	Nacogdoches Public Library
Future	Plan to maintain the system by loading new releases, as they become available. Modules currently supported are acquisitions, cataloging, circulation, serials checkin, public access, and Web access. May want to consider new modules, as they become available (interlibrary loan, binding, etc.)

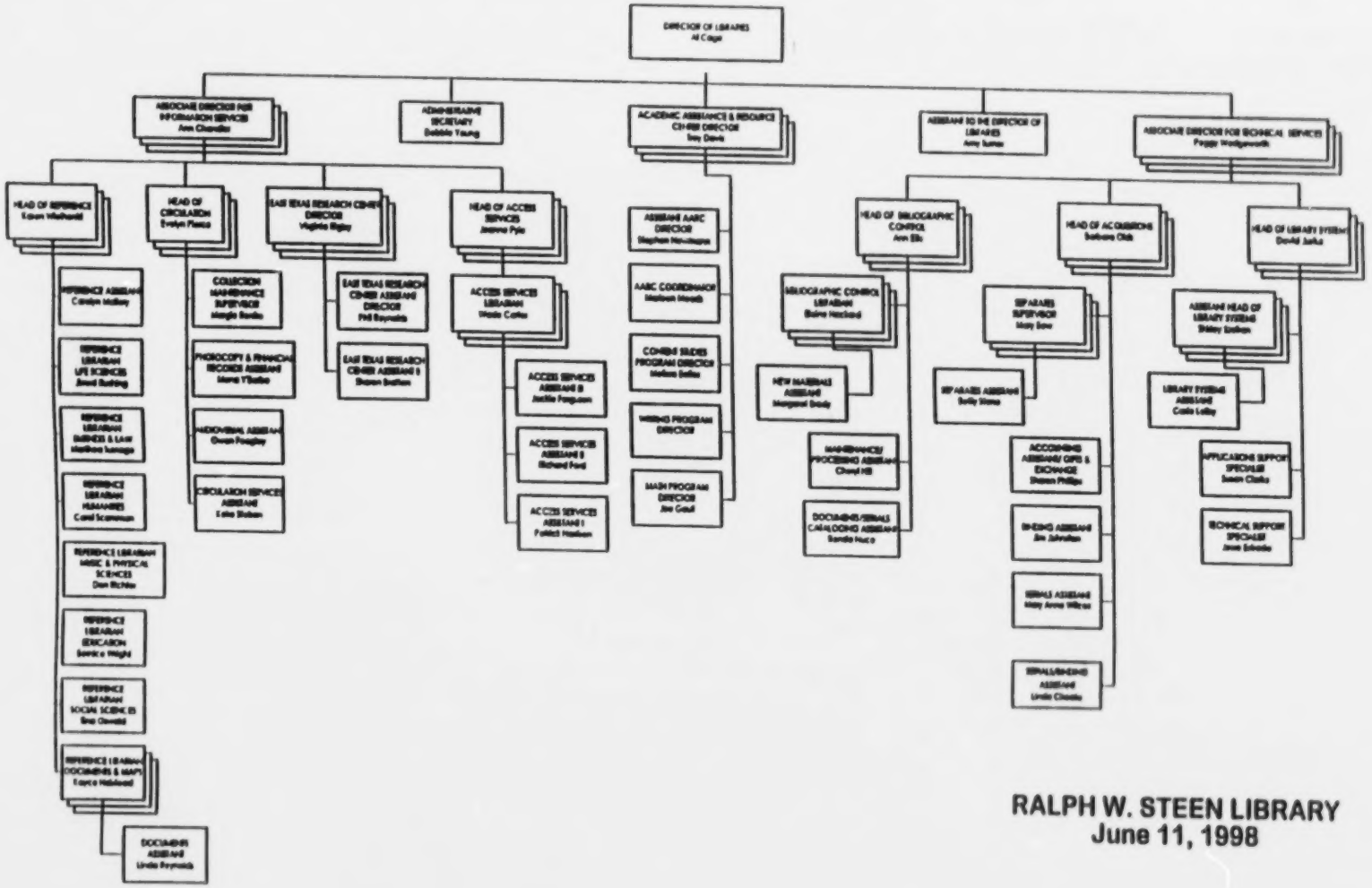
Agency Applications

Category	Provide
Application Name	**Acquisitions module**
Application Description	Used by the library's acquisitions staff to create and maintain records of materials purchased for the library. Records are available to the public in the online public catalog. Vendor database, accounting records, and other files necessary for acquiring materials are also maintained and available to the library staff.
Database System	Sybase
Development Language	SQL
Year 2000	000001
Sharing	none
Future	Load upgrades when released.
Application Name	**Cataloging module**
Application Description	Used by the library's cataloging staff to create and maintain records of the library's holdings. Records are available to the public in the online public catalog.
Database System	Sybase
Development Language	SQL
Year 2000	000001
Sharing	Nacogdoches Public Library
Future	Load upgrades when released.
Application Name	**Serials module**
Application Description	Used by the library's serials staff to predict and checkin journals. This information is available to the public in the online public catalog.
Database System	Sybase
Development Language	SQL
Year 2000	000001
Sharing	none
Future	Load upgrades when released.
Application Name	**Circulation module**
Application Description	Used by the library's circulation staff to maintain records of materials loaned to the borrowers. The system produces overdue notices and calculates fines for borrowers with overdue materials.
Database System	Sybase
Development Language	SQL
Year 2000	000001
Sharing	Nacogdoches Public Library
Future	Load upgrades when released.
Application Name	**Online Public Access Catalog module**
Application Description	Used by anyone wanting to query the database about the library's holdings from within the library.
Database System	Sybase
Development Language	SQL
Year 2000	000001
Sharing	Nacogdoches Public Library
Future	Load upgrades when released.

Application Name	**WebPAC module**
Application Description	Used by anyone wanting to query the database about the library's holdings from the Internet.
Database System	Sybase
Development Language	SQL
Year 2000	000001
Sharing	Nacogdoches Public Library
Future	Load upgrades when released.

INTERAGENCY DATA NEEDS:

Currently the only interagency network participation is the cooperative effort with the Nacogdoches Public Library. Library Systems provides them access to and support for the Horizon system as well as a limited number of software applications. Initial funding for this program was provided by a LSCA, Title III grant in 1989.



RALPH W. STEEN LIBRARY
June 11, 1998

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